

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A contrast media delivery system configured to facilitate the intravenous delivery of contrast media from a contrast media source to a patient, the contrast media delivery system comprising:

a spike for accessing contrast media from the contrast media source, the spike having an inner lumen, a drainage bore coupled to the inner lumen, a venting lumen, a venting bore coupled to the venting lumen, and a venting door in fluid communication with the venting lumen, the venting door being selectively openable such that when a user opens the venting door, air can move from the external environment through the side venting lumen and to the venting bore to equalize the air in the contrast media reservoir with the air of the external environment to reduce the potential vacuum in the contrast media source which may otherwise inhibit the free flow of fluid into the drainage bore and drainage lumen of the spike;

a length of tubing linked to the spike;

a primer bulb in fluid coupling to the length of tubing, the primer bulb adapted to transmit air from a position downstream from the spike, through the spike and into the contrast media source and thereby create a head of pressure in the contrast media source to facilitate flow of contrast media through the spike and into the length of tubing.

2. (previously presented) The contrast media delivery system of claim 1, wherein the primer bulb is positioned in an in-line configuration with the length of tubing.

3. (original) The contrast media delivery system of claim 1, wherein the primer bulb is positioned in an other than in-line configuration with the length of tubing.

4. (original) The contrast media delivery system of claim 1, wherein the primer bulb is compressible.

5. (previously presented) The contrast media delivery system of claim 4, wherein compressing the primer bulb overcomes the surface tension of the contrast media in the contrast media source.

6. (previously presented) The contrast media delivery system of claim 5, wherein a single compression of the primer bulb overcomes the surface tension of the contrast media in the contrast source.

7. (previously presented) The contrast media delivery system of claim 6, wherein more than one compression of the primer bulb overcomes the surface tension of the contrast media in the contrast media source.

8. (original) The contrast media delivery system of claim 4, wherein compression of the primer bulb draws contrast media into the length of tubing.

9. (original) The contrast media delivery system of claim 4, wherein the length of tubing and the primer bulb are isolated from the external environment before compression of the primer bulb.

10. (previously presented) The contrast media delivery system of claim 4, wherein the contrast media source comprises a contrast media reservoir.

11. (currently amended) A contrast media delivery system configured to facilitate the intravenous delivery of contrast media from a contrast media reservoir to a patient, the contrast media delivery system comprising:

a contrast media reservoir;

a spike apparatus for accessing contrast media in the contrast media reservoir, the spike having an inner lumen, a drainage bore coupled to the inner lumen, a venting lumen, a venting bore coupled to the venting lumen, and a venting door in fluid communication with the venting lumen, the venting door being selectively openable such that when a user opens the venting door, air can move from the external environment through the side venting lumen and to the venting bore to equalize the air in the contrast media reservoir with the air of the external environment to reduce the potential vacuum in the contrast media source which may otherwise inhibit the free flow of fluid into the drainage bore and drainage lumen of the spike;

a length of tubing linked to the spike apparatus;

a primer bulb in fluid communication with the length of tubing, the primer bulb adapted to transmit air from a position downstream from the spike, through the spike and into the contrast media source and thereby increase the pressurization in the contrast media reservoir, such that the pressurization in the reservoir subsequent to actuation of the primer bulb is greater than the pressurization in the reservoir before actuation of the primer bulb, to facilitate flow of contrast media into the length of tubing;

a user controlled valve mechanism that is adapted to close and provide a fluid tight seal to isolate the contrast media reservoir, spike apparatus, length of tubing, and

primer bulb from the inflow of air from the external environment distal to the valve mechanism.

12. (Cancelled)

13. (currently amended) The contrast media delivery system of claim [[12]] 11, wherein the venting door is opened to vent the contrast media reservoir and allow the flow of contrast media when the head of pressure in the contrast media reservoir has dissipated and equalized to the pressure of the external environment as a result of pushing contrast media through the spike apparatus into the tubing.

14. (previously presented) The contrast media delivery system of claim 11, wherein the venting door comprises a one-way valve.

15. (currently amended) The contrast media delivery system of claim 11, wherein the valve mechanism ~~venting door~~ comprises a stop cock.

16. (previously presented) The contrast media delivery system of claim 11, wherein the venting door is integrally coupled to the spike apparatus.

17. (previously presented) The contrast media delivery system of claim 11, wherein the valve mechanism facilitates the flow of contrast media from the contrast media reservoir to a body system distal to the valve mechanism.

18. (previously presented) The contrast media delivery system of claim 11, wherein the valve mechanism has an first position in which the primer bulb and contrast media reservoir are isolated from air pressurization from the external environment and a second position that is an inline position allowing the flow of contrast media from portions of the contrast media delivery system distal to the valve mechanism.

19. (previously presented) The contrast media delivery system of claim 11, wherein the valve mechanism further comprises a third position that is a bleed off position in which contrast media is allowed to flow from portions of the contrast media delivery system distal to the valve mechanism to the external environment.

20. (previously presented) The contrast media delivery system of claim 19, wherein the valve mechanism comprises a three-way stop cock.

21. (previously presented) The contrast media delivery system of claim 19 , wherein the valve mechanism is positioned below the primer bulb.

22. (currently amended) A contrast media delivery system configured to facilitate the intravenous delivery of contrast media from a contrast media reservoir to a patient, the contrast media delivery system comprising:

a contrast media reservoir;

a spike for accessing contrast media in the reservoir the spike having an inner lumen, a drainage bore positioned on a distal end of the inner lumen, a venting lumen, a venting bore positioned on a distal end of the venting lumen, wherein the drainage bore is positioned at a lower elevation than the venting bore when the spike is positioned in the contrast media reservoir;

a length of tubing linked to the spike;

a primer bulb connected in-line with the length of tubing, wherein the primer bulb is compressible to transmit air from a position downstream from the spike, through the spike and into the contrast media source and thereby create a head of pressure above the contrast media in the contrast media reservoir to facilitate the flow of contrast media into the length of tubing;

a valve mechanism providing a fluid tight seal to isolate the reservoir, length of tubing, and primer bulb from the inflow of air from the external environment.

23. (previously presented) The contrast media delivery system of claim 22, wherein the spike comprises a vented spike apparatus.

24. (original) The contrast media delivery system of claim 23, wherein the vented spike apparatus allows air to enter the contrast media reservoir.

25. (previously presented) The contrast media delivery system of claim 24, wherein the vented spike apparatus facilitates the flow of contrast media into proximal portions of the contrast media delivery system.

26. (currently amended) A contrast media delivery system configured to facilitate the intravenous delivery of contrast media from a contrast media reservoir to a patient, the contrast media delivery system comprising:

a spike for accessing contrast media in a contrast media reservoir the spike having a drainage lumen positioned in fluid communication with the contrast media reservoir, a venting lumen, a venting bore positioned on the distal end of the venting lumen such that the venting bore is in fluid communication with the contrast media reservoir, a side venting opening connected to the venting lumen and a venting door to selectively open the side venting opening to equalize pressure of the contrast media reservoir with the pressurization of the external environment wherein the venting lumen is isolated from the inner lumen to allow air to flow from the side venting opening through the venting lumen and into the contrast media reservoir while contrast media flows from the contrast media reservoir and into the drainage lumen;

a compressible primer bulb in fluid connection with the contrast media reservoir, wherein the primer bulb is configured to compress and thereby increase the pressurization in the contrast media reservoir, such that the pressurization in the reservoir subsequent to actuation of the primer bulb is greater than the pressurization in the reservoir before actuation of the primer bulb, and to completely fill with contrast media once the contrast media has reached the patient, to facilitate the flow of contrast media;

and a fluid delivery mechanism for delivering contrast media from the contrast media reservoir to the patient, wherein the primer bulb is positioned in-line with the fluid delivery mechanism.

27. (original) A contrast media delivery system of claim 26, wherein the primer bulb includes an outer wall.

28. (original) A contrast media delivery system of claim 27, wherein the outer wall defines an inner cavity.

29. (original) A contrast media delivery system of claim 27, wherein the outer wall is comprised of a pliable material.

30. (original) A contrast media delivery system of claim 29, wherein the outer wall is comprised of polyurethane.

31. (original) A contrast media delivery system of claim 30, wherein the outer wall is comprised of rubber.

32. (original) A contrast media delivery system of claim 28, wherein primer bulb comprises a rigid housing with a compressible mechanism configured to change the volume of primer bulb cavity.

33. (withdrawn)